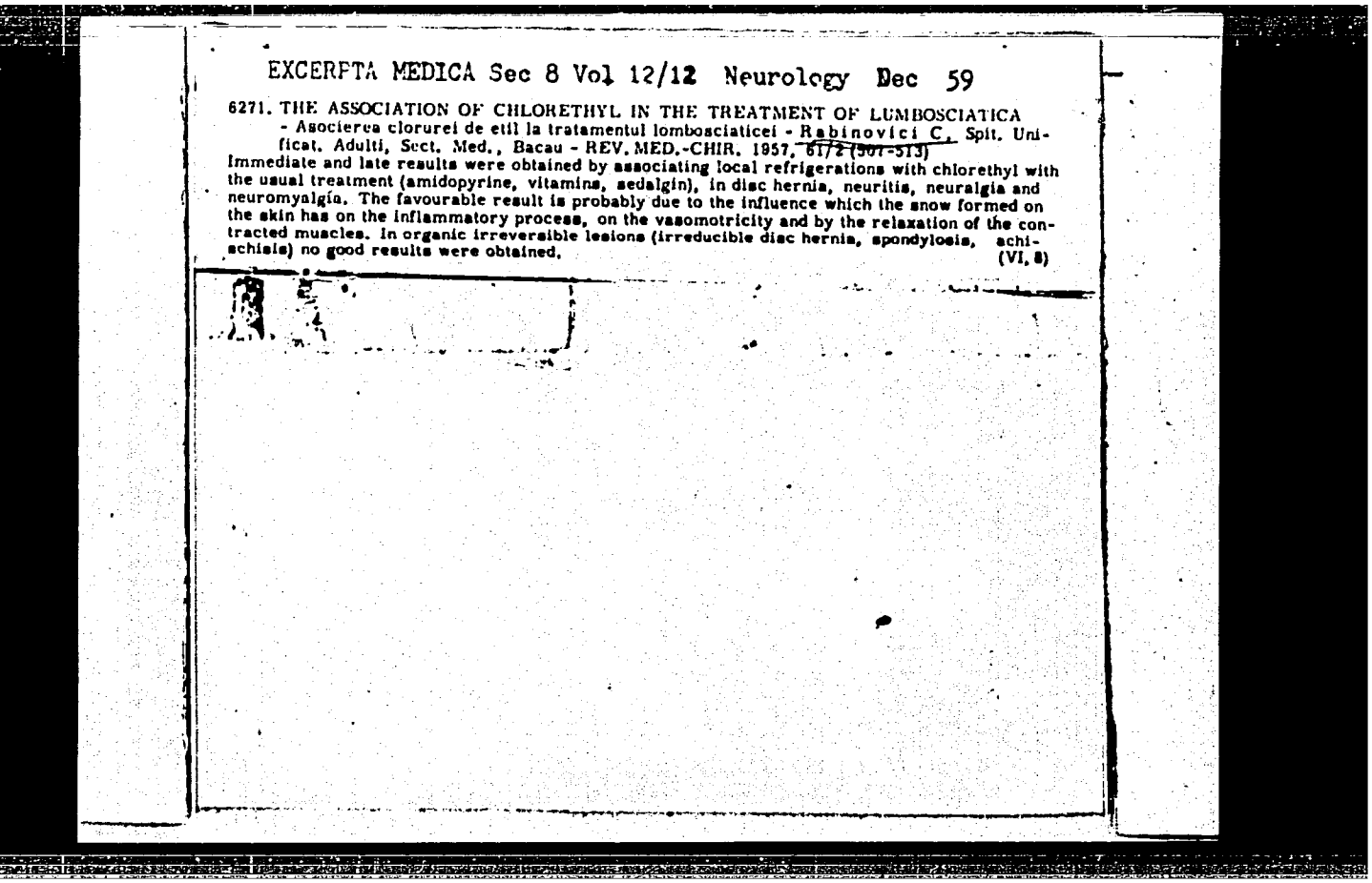


EXCERPTA MEDICA Sec 8 Vol 12/12 Neurology Dec 59

6271. THE ASSOCIATION OF CHLORETHYL IN THE TREATMENT OF LUMBOSCIATICA - Asocierea clorurei de etil la tratamentul lombosciaticei - Rabinovici C. Spit. Unificat. Adulti, Sect. Med., Bacau - REV. MED.-CHIR. 1957, 61/2 (507-513)

Immediate and late results were obtained by associating local refrigerations with chlorethyl with the usual treatment (amidopyrine, vitamins, sedalgin), in disc hernia, neuritis, neuralgia and neuromyalgia. The favourable result is probably due to the influence which the snow formed on the skin has on the inflammatory process, on the vasomotricity and by the relaxation of the contracted muscles. In organic irreversible lesions (irreducible disc hernia, spondylosis, achiachisis) no good results were obtained. (VI, 8)

RABINOVICI, David, ing. (Bucuresti)

Technological problems of the new series of short circuit asynchronous motors of the clearance gauge. Electrotehnica 9 no.8: 288-295 Ag '61.

1. Tehnolog sef adjunct la fabrica de masini electrice "Klement Gottwald", Bucuresti.

RABINOVICI, I.

Directions regarding the technical mangement of purification stations in petroleum refineries. p. 134.
(HIDROTECHNICA, Vol. 2, no. 3, May/June 1957, Rumania)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 2, No. 12, Dec. 1957 Uncl.

COUNTRY : Rumania
CATEGORY :

ABS. JOUR. : RZKhim., No. 22 1959, No. 79001

AUTHOR : Niculescu, E. and Rabinovici, I.
INST. : Not given
TITLE : On the Purification of the Waste Waters from the Retting of Flax and Hemp

ORIG. PUB. : Hidrotehnica, 3, No 10, 372-375 (1958)

ABSTRACT : The authors give a critical evaluation of the various processes used at Rumanian enterprises (dilution, mechanical, chemical, and biochemical purification, gradual and uniform discharge of the waste waters, utilization of the waste waters in irrigation). Conditions best suited for the application of the various methods are indicated.

Ya. Matlis

CARD: 1/1

NEGULESCU, M., ing.; RABINOVICI, I., ing.

Purification of waste waters coming from the oil refineries in Rumania. Meteorologia hidrol gosp 6 no.2:136-147 '61.

KLETKIN, M.I.; RABINOVICI, I.P.; TENENBAUM, M.M.

Operational safety and durability appraisal of agricultural machines. Analele agric zooteh 17 no.6:152-160 N-D'63.

RABINOVICK, M. S.
R. A. KONOVALOVA, ZhOKh, 21, 773-80, 1951

RABINOVIE, H. S.

"Sur les derives anesthesiques de la convolvine et de la convolamine". Rabinovie, H. S., Konovalova, R. A. (p. 41)

SO: Journal of General Chemistry
(Zhurnal Obshchei Khimii) 1939, Volume 9, #1

RABINOVITS, S.I.

PA - 3097

AUTHOR: RABINOVIC,S.I., eng.

TITLE: High-Voltage Autotransformers for Power Systems. (Vysokovol'tnyye avtotransformatory dlya energeticheskikh sistem, Russian)

PERIODICAL: Elektrichestvo, 1957, Vol Nr 5, pp 6-12 (U.S.S.R.)

Received: 6 / 1957 Reviewed: 7 / 1957

ABSTRACT: First the advantages of the use of autotransformers are described. The possibility of reducing (30% and more) the type output $P' = \eta P$ (η is the useful coefficient, P is the transitory power) leads to the corresponding reduction of material consumption and losses. The reduction of the weight and measurements associated with it is essential. In 1955 several groups of 220/110 kW, 3 x 80 and 3 x 40 MVA autotransformers were put into operation. In 1957, in the first half year, an autotransformer group 3 x 167 MVA, 400/242 kV with tertiary winding 11 kV started operation. The set up of the winding connections has a very considerable effect on the idle power and on the cost of the set up itself which is here, naturally, much less. The following disadvantages are mentioned: 1.) Significant additional losses caused by the passage of leakage currents through the metal parts of the detachable piece, 2.) The possibility of the direct passage of the voltages. Hence corresponding discharges are permanently kept switched in on both lead in lines, 3.) The voltage adjustment is more complicated.

Card 1/2

PA - 3097

High-Voltage Autotransformers for Power Systems.

4.) The impossibility of obtaining a phase shift between the voltages of the connecting circuit. High tension autotransformers are supplied as a rule with a third winding of lower voltage (6, 10 or 35 kV). As an example a water power system with 8 generators actually in construction is mentioned.
Finally it is established that large high tension transformers offer very fundamental advantages. Furthermore, there is every reason why they should be widely used for both step-up and step-down transformer plants. (10 Illustrations).

ASSOCIATION: Moscow Transformer Plant Kuybyshev
PRESENTED BY:
SUBMITTED: 18.2.1957
AVAILABLE: Library of Congress

Card 2/2

RABINOVITZ, ELSA

RUMANIA/Chemical Technology - Chemical Products and Their Application, Part 3. - Wood Pulp Industry, Hydrolysis Industry. H-24

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 48250

Author : I. Cornea, V. Hirsch, Elsa Rabinovitz

Inst : -

Title : Upon the Purification of Sulfate Turpentine in People's Republic of Rumania.

Orig Pub : Rev. chim., 1957, 8, No 3, 203-204

Abstract : Raw sulfate turpentine (ST) was treated with sodium hypochlorite solution containing 12.5% of active chlorine in order to destroy the disagreable odor and to prepare ST suitable for organic synthesis. The desagreeable odor dissapears at such a treatment in the result of the oxidation of sulfite compounds and their conversion into sulfons and sulfo acids. The ST properties before purification: appearance - transparent fluid,

Card 1/2

RABINOVIYA, E. A. and SURGUCHEV, B. D.

Easachnik Po Obshchei Elektrotekhnike (Digest of Various Problems Related to General Electro-Techniques), 160 p., Moscow and Leningrad, 1951.

BARINOVIYA, N. G.

26673 K voprosu o prioritete otechestvennykh okulistov. (Ist. spravka) Vestnik oftalmologii, 1949, No. 4, s. 38

SO: LETOPIS' NO. 35, 1949

RABINSHTEYN, I.S.

Use of lidocaine for epibulbar anesthesia. Vest.oft. no.3:71-72 My-Je '62. (MIRA 15:8)

1. Glaznoye otdeleniye Yegor'yevskoy gorodskoy bol'nitsy Moskovskoy oblasti.
(ANESTHESIA IN OPHTHALMOLOGY) (ACETOXYLIDIDE)

RABINSKIY, N. L.

AID Nr. 970-10 17 May

DESIGNING CANTILEVER PLATES BY VLASOV'S VARIATIONAL METHOD (USSR)

Rabinskiy, N. L. Izvestiya vysshikh uchebnykh zavedeniy. Aviatsionnaya tekhnika, no. 1, 1963, 58-65. S/147/63/000/001/007/020

An approximate method of design calculation of cantilever plates of constant cylindrical rigidity is developed. Plates with plan forms of the type used chiefly for airplane wings — rectangular, tapered, and triangular — are discussed. A fourth-order partial differential equation for deflections of the middle surface of a rigid plate is used as the initial equation. By applying the principle of virtual displacements, defining the deflections in accordance with V. Z. Vlasov's variational method, and taking into account the work of external forces and moments, an infinite system of differential equations is

Card 1/2

AID Nr. 970-10 17 May

DESIGNING CANTILEVER PLATES [Cont'd] S/147/63/000/001/007/020

derived from which a definite solution can be obtained by setting up appropriate boundary conditions (static or kinematic) on the lateral edges. Formulas for deflections of the following cantilever plates are deduced: rectangular, tapered, triangular, trapezoidal of arbitrary shape -- all under a uniform continuous load -- and rectangular under a nonuniform continuous load. The calculation of bending moments and of normal and tangential stresses is not given, since they can be easily calculated from deflection formulas by using conventional formulas of elasticity theory. [VK]

Card 2/2

DROBYSHEV, A.; BONDAREV, M.; SAPOZHNIKOV, F.; ROGOVIN, N.; ACHKASOV, D.; VESELOV, N.; GROBOKOPATEL', S.; RABINSKIY, M.; PESTOVSKIY, A.

Semen Iosifovich Kazarnovskii; obituary A. Drobyshev and others. (MLRA 9:8)
Elek.sta. 27 no.5:63 My '56.
(Kazarnovskii, Semen Iosifovich, d.1956)

CHUDOVICHEVA, M.A.; RABINSKIY, P.M.; KAPRALOV, V.P.

Measurements of the latitude of the Engel'gardt Astronomical Observatory in 1957-1958. Astron. tsir. no.199:14-15 Ja '59. (MIRA 13:2)

1.Astronomicheskaya observatoriya im. V.P. Engel'gardta.
(Astronomy, Spherical and practical)

RABINOVICH (PIN)

PHASE I BOOK EXPLOITATION SOV/5742

Akademiya nauk SSSR. Mezhduvedomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. VIII razdel programmy MGG: Shiroty i dolgoty.

Predvaritel'nyye rezul'taty issledovaniy kolebaniy shirot i dvizheniya polyusov zemli; sbornik statey (Preliminary Data of Latitude Variations and Migrations of the Earth's Poles; Collected Articles. No. 1) Moscow, Izd-vo AN SSSR, 1960. 97 p. Errata slip inserted. 1,000 copies printed.

PURPOSE: This collection of articles is intended for astronomers, geophysicists, and other scientists concerned with the problem of latitude variations and the migration of the Earth's poles.

COVERAGE: Part I of the collection contains preliminary results of latitude observations from 1957.5 through 1959.0 made at IGY stations in the USSR network, including new stations in Siberia. Part II consists of articles describing new instruments, observational programs and methods, and procedures of processing the latitude observational data. With the larger number of stations and the use of new instruments it is anticipated that the final results will provide a more comprehensive study of anomalies and instrumental

Card 1/5

errors in latitude observations than has been possible previously. No personalities are mentioned. English abstracts and references follow each article.

TABLE OF CONTENTS:

Preliminary Data of Latitude Variations (Cont.) SOV/5742

Card 3/5

Preliminary Data of Latitude Variations (Cont.) SOV/5742

AVAILABLE: Library of Congress

Card 5/5

JA/dwm/mas
11-7-61

CHUDOVICHEVA, N.A.; KAFRALOV, V.P.; RABINSKIY, P.M.; URASINA, I.A.

Latitude variations of the Engel'gardt Astronomical Observatory in 1959. Astron.tsir. no.210:14 Ap '60. (MIRA 13:9)

1. Astronomicheskaya observatoriya im.Engel'gardta.
(Latitude variation)

RABINZON, M. A.

2258. Oil rubbers and their technical properties. A. E. Kalans, M. A. Rabinzon, P. I. Zakharchenko, M. S. Fainshtein and A. B. Zaitseva. Khim. Prom., 1956, No. 5, 11-19; Battelle Tech. Rev., 1957, 6, abs. 1614. The relation between the composition of oil and its compatibility with synthetic rubber together with an investigation of properties is described.

5

Rabi, S.M.

PETROV, G.S.; RABITS, S.M.; BRODSKIY, G.S.

Highly durable materials for plastics based on rubber and formaldehyde-phenol resins. Izobr.v SSSR 2 no.10:11-12 O '57. (MIRA 10:11)

(Plastics industry) (Rubber, Synthetic) (Resins, Synthetic)

RABITS, S. M.

PHASE I BOOK EXPLOITATION SOV/4592

Moscow. Gosudarstvennyy nauchno-issledovatel'skiy institut plasticheskikh mass

Issledovaniya v oblasti termoreaktivnykh plastmass (Investigations in the Field of Thermosetting Plastics) Moscow, Goskhimizdat, 1959. 98 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agencies: Gosudarstvennyy komitet Soveta Ministrov SSSR po khimii; Gosudarstvennyy nauchno-issledovatel'skiy institut plasticheskikh mass.

Ed.: V. N. Tar'yev; Tech. Ed.: Ye. G. Shpak.

PURPOSE: This book is intended for chemical engineers and technicians, and research chemists interested in thermosetting plastics.

COVERAGE: The collection contains 11 articles which reflect some Soviet efforts and achievements in synthesizing plastics with special physicochemical properties, i.e., water-, acid-, heat-, and arc-resistance. No personalities are mentioned. References given are mainly Soviet and English, with several French and German and accompany the articles.

JA/rn/fal
1-5-61

Card 3/3

15

5(3); 25(2) PHASE I BOOK EXPLOITATION SOV/2884

Moscow. Dom nauchno-tekhnicheskoy propagandy imeni F.E. Dzerzhinskogo

Plastmassy v mashinostroyenii (Plastics in Machine Building) Moscow, Mashgiz, 1959. 236 p. Errata slip inserted. 8,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed. (Title page): V.K. Zaygorodniy; Ed. (Inside book): B.M. Notkin, Engineer; Ed. of Publishing House: G.M. Konovalov; Tech. Ed.: A. F. Uvarova; Managing Ed. for Literature on Machine Building and Instrument Making (Mashgiz): N.V. Pokrovskiy, Engineer.

PURPOSE: This collection of articles is intended for engineers and technicians in the machine-building industry.

COVERAGE: This collection reviews the progress made by the Soviet Union in the field of manufacturing new plastic materials and fabricating different plastic -

Card 1/4

material articles for use in the machine-building industry. Physicomechanical and dielectric properties of phenolite, decorrosite, fluoroplastics, epoxy resins, polyamides, laminated plastics, and fiberglass plastics are analyzed and their use in machine building described. Characteristics and composition of adhesives and bonding agents are given and the technology of the pressing process described. Methods of coating with plastics as a protection against corrosion are explained, and metallization of plastics achieved by vacuum evaporation is reviewed, as well as equipment used for manufacturing and fabricating plastics and articles made of plastics. Mechanization of certain operations and automatic control of various processes are discussed. No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

TM/gmp
1-19-60

41355
S/081/62/000/017/084/102
B177/B186

1.1600

AUTHOR: Rabits, S. M.

TITLE: High-strength pressed materials of the type FPK

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 541, abstract 17P44 (In collection: Plastmassy v mashinostr. M., Mashgiz, 1959, 14 - 18)

TEXT: Pressed materials were obtained on the basis of products from combining phenolformaldehyde resins with synthetic rubber mark СКН-26 (SKN-26) (containing 5 - 30% of rubber), known as НР(NR) alloys with fabrics or fibrous materials employed as fillers. These pressed materials, known by the marks ФКП-1 (FKP-1), ФКП-2 (FKP-2), ФКПМ-10 (FKPM-10), ФКПМ-15 (FKPM-15), ФКП-25 (FKP-25), and ФКПМ-15Т (FKPM-15T), differ from ordinary phenoplastics having similar fillers in that the fluidity of ordinary powders is preserved whilst combining high electrical insulating properties, heat-resistance and water-resistance with good mechanical and elastic properties. The author describes the methods of treatment and the possibilities for using

Card 1/2

S/081/62/000/017/084/102
B177/B186

High-strength pressed materials ...

pressed materials in various branches of industry. The physical, mechanical and dielectric properties of the new pressed materials are also studied. [Abstracter's note: Complete translation.]

4

Card 2/2

RABITSKIY, A. B., Lt Col

FDB

70T84

USSR/Medicine - Tuberculosis, Pulmonary Mar/Apr 1948
Medicine - Deglutition, Disorders

"The Electrophoresis of Novocaine in the Field of the Jugular Neurovascular Group as a Method of Combating Dysphagia During Laryngeal-Pulmonary Tuberculosis," Lt Col A. B. Rabitskiy, Med Sv; Maj I. M. Vil'k, Med Sv, Yalta Gen Sanatorium No 1 of the Armed Forces, 4 pp

"Vest Oto-Rino-Laringol" Vol X, No 2

The matter is of importance since 10-20% of tubercular patients admitted to the sanatorium in spring and autumn suffer from acute dysphagia. Describes the technique of electrophoresis: 1-5% solution of novocaine in 80° spirits being used with current of 0.15-0.30 Ma for 10-15 minutes. Gives particulars of its successful application in the sanatorium.

70T84

FDB

USSR/Medicine - Tuberculosis, Pulmonary Mar/Apr 1948
(Contd)

RABKIN, A.L.

New relieving mechanism. Mashinostroitel' no.12:15 D '64. (MIRA 18:2)

S/029/60/000/05/10/024
B008/B017

9.6000

AUTHOR: Rabiza, F., Engineer

TITLE: Radio Waves Measure the Component Part (In the Laboratory of Young Scientists of Riga)

PERIODICAL: Tekhnika molodezhi, 1960, No. 5, pp. 18-19

TEXT: In this article, the measurement of microscopical lengths by means of electromagnetic oscillations is described. At the Institut mashinovedeniya Latviyskoy Akademii nauk (Institute of Machine Construction of the Latviyskaya Academy of Sciences), a group of young scientists work in the laboratoriya avtomatizatsii proizvodstvennykh protsessov (Laboratory for the Automation of Production Processes) under the supervision of Physicist Yuriy Grigulis on "Vysokochastotnyy elektromagnitnyy metod kontrolya" (Electro-magnetic High-frequency Control Method). Viktor Fastritskiy, Imant Matis, and Karl Ozols belong to this group. Juriy Grigulis built an electromagnetic high-frequency apparatus - the VChEM - which can be used for different measurements. Operation of this instrument is based on the utilization of some

Card 1/3

30-50

Radio Waves Measure the Component Part (In the Laboratory of Young Scientists of Riga)

S/029/60/000/05/10/024
B008/B017

characteristic features of electromagnetic high-frequency current. The high-frequency current is fed from a tube generator into the so-called radiator which is the measuring agent proper (Scheme on the left of the title). In contrast to the radiation by radio antennas, the high-frequency current is here strongly concentrated, it is not interrupted but returns to the radiator only slightly weakened. This current is then measured by means of a milliammeter or a microammeter. The penetration depth of the current into the metal depends on the frequency of the electromagnetic oscillations. This is considered when employing the instrument for different measurements. The measurement of a dielectric layer is shown on the right of the title. Some types of radiators are shown. The size of one of these radiators as compared with a writing pen is shown. The fields of application of "VChEM" are mentioned. Also the portable semiconductor instrument "PPM4" is shown. It is used to measure the layers on a magnetic base and in galvanic processes. The "ILP2" model which is used for grinding components, and the universal instrument "UP3" are shown. "UP3" serves to determine the composition of alloys, to detect microgaps on the metal surface, to determine the degree of hardness, to measure the thickness of coatings, etc. "VChEM" may also be employed to

Card 2/3

Radio Waves Measure the Component Part (In the Laboratory of Young Scientists of Riga)

S/029/60/000/05/10/024
B008/B017

regulate the level of the melt in the metal container. The instrument is mounted outside the container, and measures the level with an accuracy of 0.5 mm. "VChEM" is of great use also for scientific research purposes. An advantage of the new measuring method is its continuity so that already during the operational process the occurrence of waste can be avoided. This new control method has also a wide field of application in overall automation. There are 7 figures.

Card 3/3

RABIZA, F., insh.

Forgotten attraction. Tekh.mol. 28 no.6:37 '60. (MIRA 13:7)

(Photography, Stereoscopic)

RABIZA, F.

Simple demonstration experiments. Nauka i zhizn' 2[illegible] no.7:54 Jl '61. (MIRA 14:8)

(Friction)

RABI-ZADE, M. M.

Dissertation defended for the degree of Candidate of Economic Sciences at the Institute of the Peoples of Asia

"Development of Capitalist Entrepreneurship in Iran's Industry in the 1930's."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

S/115/60/000/007/005/011
B019/B058

AUTHORS: Andrushevich, Yu. M., Klebanov, M. K., Tslaf, M. Ya., Rabkin, A. L.

TITLE: Cinematographic Measuring Instrument for Tapping Machines

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 7, pp. 27 - 28

TEXT: The measuring instrument described here is intended for studying the influence of the error of the individual tapping chains on the accuracy of the tapped threads. The scheme of the experimental arrangement shown in Fig. 1 consists of a self-recorder of the type БВ-662 (BV-662) and an inductive pickup, used for checking the relative motion of the support and the screw of the testifying thread. The screw of the testifying thread and the inductive pickup are discussed by the aid of Fig. 2. The inductive pickup consists of 3 identical units distributed at 120° on a circle around the thread axis. The setup and mode of operation of the experimental arrangement are described. It is finally reported that 2 types of tapping machines were checked with the instrument described here and that a reduction of manufacturing faults could thereby be achieved. There are 2 figures.

Card 1/1

RABKIN, A.L.

Mechanism for automatic shifting of cutting tools. Mashinostroitel' no.11:9 N '62. (MIRA 15:12)

(Machine tools—Attachments)

RABKIN, A.L.; FEDOTENOK, A.A., prof., retsenzent; VLADIMIROV, V.M., inzh., red.

[Relieving machine tools] Zatylovochnye stanki. Moskva, Mashinostroenie, 1964. 148 p. (MIRA 17:12)

RABKIN, B.

Calculation of the economic efficiency of new machinery. Den. i kred. 16 no.10:70-75 O '58. (MIRA 11:11)
(Silk manufacture--Finance)

RABKIN, B.A.

BAUSIN, A.F.; SOKOLOV, A.A.; ANTONOV, V.Ya.; KURDYUMOV, S.V.; BEL'KEVICH, P.I.; SAVINYKH, A.I.; KARAKIN, F.F.; SOLOPOV, S.G.; YEFIMOV, V.S.; YARIVITSIN, V.I.; RABKIN, B.A.; BABARIN, A.F.; MATVEYEV, L.M.; FUNIKOV, S.A.; CHERNENKOV, D.P.; BULAYEVSKIY, N.V.; kandidat tekhnicheskikh nauk; SHINKARINK, K.K.; TSUPROV, S.A.; GINZBURG, L.N.; VASIL'YEV, Yu.K.

Scientific and technical conference on the work of the peat industry of the Ministry of Electric Power Stations. Torf.prom. 32 no.2:1-20 '55. (MLRA 8:5)

1. Zamestitel' ministra elektrostantsiy (for Bausin). 2. Zamestitel' direktora VNIITP (for Sokolov). 3. Zamestitel' direktora MTI (for Antonov. 4.Zamestitel' direktor "'krniimesttopprom"(for Kurdyumov). 5. Direktor Instituta torfa AN BSSR(for Bel'kevich). 6. Nachal'nik Glavenergozapchasti MES(for Savinykh). 7. Glavnyy inzhener Ivanovskogo torfotresta (for Karakin). 8. Zamestitel' direktora MTI (for Solopov) 9. Upravlyayushchiy Shaturskogo torfotresta (for.Yefimov). 10. Glavnyy mekhanik Invanosvkogo torfotresta (for Yarovitsin). 11. Glavnyy mekhanik Leningradskogo torfotresta (for Rabkin). 12. Glavnyy inzhener Ozeretsko-Neplyuyevskogo torfopredpriyatiya (for Babarin). 13. Glavnyy inzhener Gor'kovskogo torfotresta (for Matveyev). 14 Rukovoditel' laboratorii VNIITP (for Funikov). 15. Glavnyy inzhener tresta Lentorfostroy (for Chernenkov).

(Continued on next card)

SOKOLOV, A.A.; PETRENKO, F.F.; KOVALEV, V.F.; YELISEYEV, M.A.; ROZENPLENTER, N.F.; YANCHUKOVICH, A.E.; CHUBAROV, N.D.; KONTSEVOY, N.S.; PREOBRAZHENSKIY, V.A.; BOCHAROV, M.S.; KASHCHEYEV, G.G.; SELENNOV, G.V.; SAFONOV, K.Ye.; FUNIKOV, S.A.; RASKIN, G.I.; RABKIN, B.M.

Vadim Konstantinovich Gutsunaev; obituary. Torf.prom. 39 no.3:37 '62. (MIRA 15:4)
(Gutsunaev, Vadim Konstantinovich, 1914-1942)

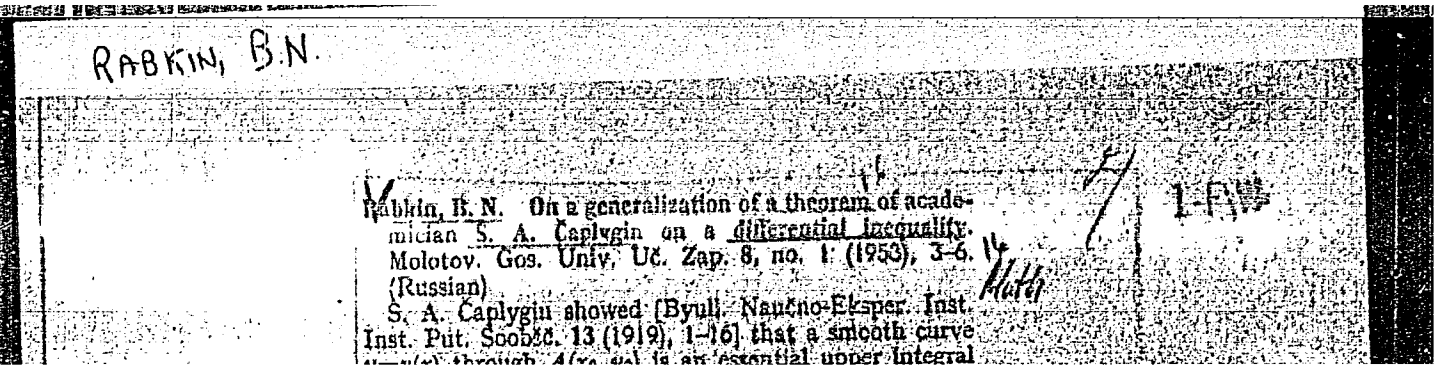
1. SOKOLOV, D.A. ENG. - RABKIN, B.N. ENG.

2. USSR (600)

4. Bearings (Machinery)

7. Use of Goodrich bearings in high pressure peat pumps. Torf. prom. 29 no. 12 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified



RABKIN, B.N.

Rabkin, B. N. On a generalization of a theorem of academician S. A. Caplygin on a differential inequality. Molotov. Gos. Univ. Uč. Zap. 8, no. 1 (1953), 3–6. (Russian)

S. A. Caplygin showed [Byull. Naučno-Eksper. Inst. Inst. Put. Soobšč. 13 (1919), 1–16] that a smooth curve

1-FW

Math

RABKIN, B.N.; SMIRNOV, G.A.; USPENSKIY, V.V.; KOLOTUSHKIN, V.I., red.; BORUNOV, N.I., tekhn. red.

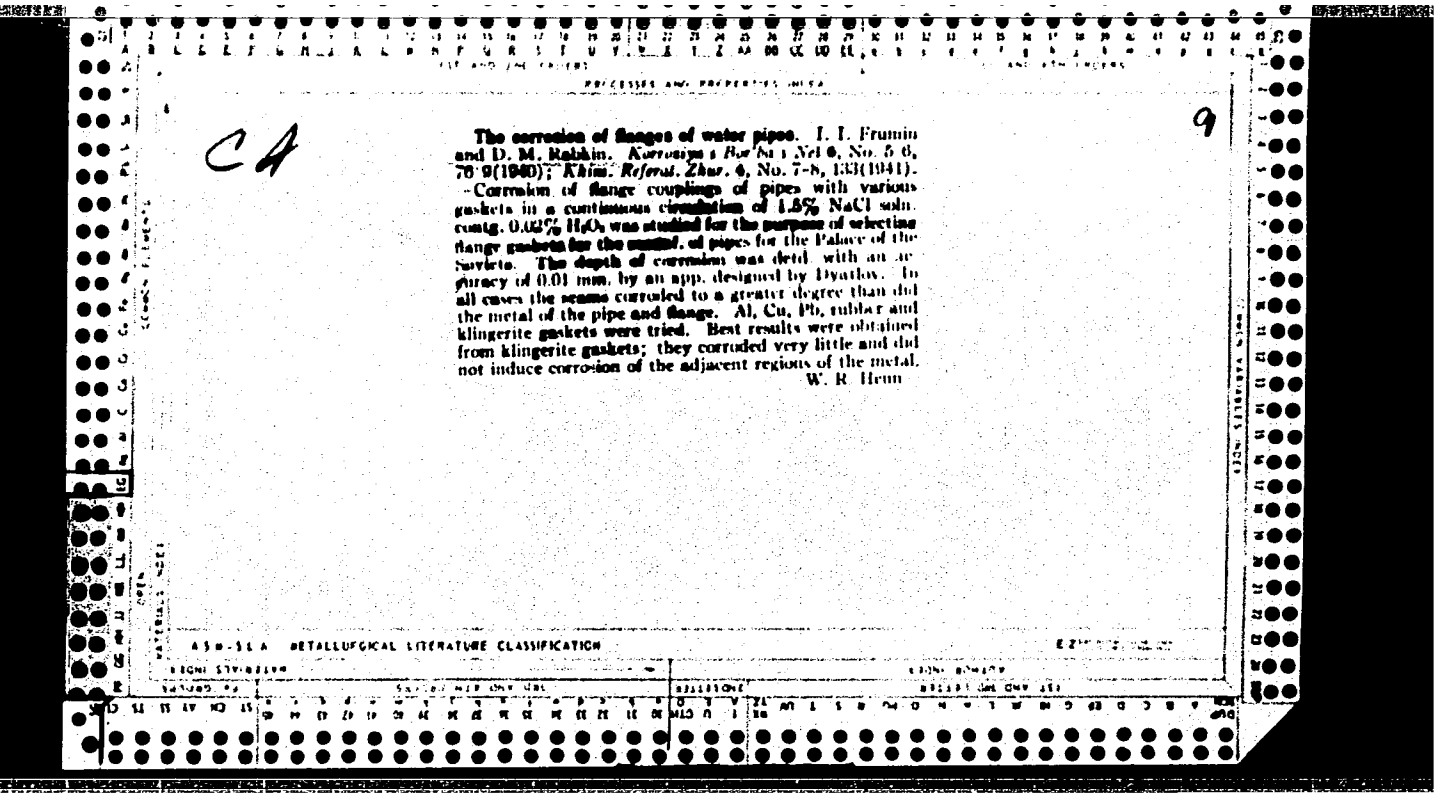
[Organization of fuel storage in peat works] Organizatsiia skladov goriuchego na torfopredpriiatiiakh. Moskva, Gos. energ. izd-vo, 1958. 79 p. (MIRA 11:12)

(Fuel--Storage)

RABKIN, Boris Naumovich; SMIRNOV, Georgiy Alekseyevich; KOLOTUSHKIN, V.I., redaktor; SEVORTSOV, I.M., tekhnicheskiy redaktor

[Handbook on the use of lubricants in peat enterprises] Rukovodstvo po primeneniiu smazochnykh materialov na torfopredpriiatiiakh. Moskva, Gos.energ.izd-vo, 1955. 94 p. (MLRA 9:3)

(Lubrication and lubricants) (Peat)

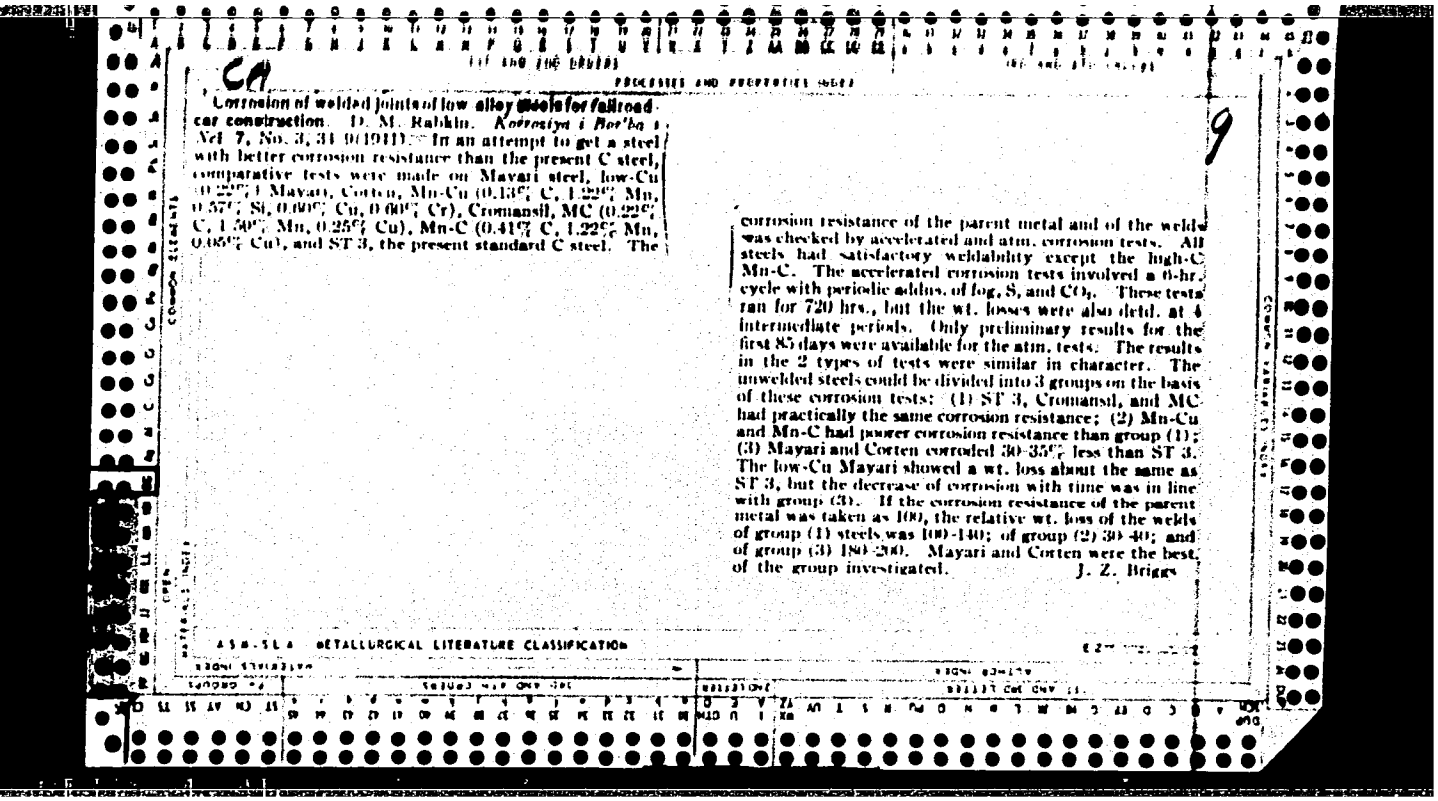


C4

9

The corrosion of flanges of water pipes. I. I. Frumin and D. M. Rabkin. *Korroziya i Bor'ba s Nei* **6**, No. 5-6, 76-9(1940); *Khim. Referat. Zhur.* **4**, No. 7-8, 133(1941).—Corrosion of flange couplings of pipes with various gaskets in a continuous circulation of 1.5% NaCl soln. contg. 0.02% H_2O_2 was studied for the purpose of selecting flange gaskets for the central oil pipes for the Palace of the Soviets. The depth of corrosion was detd. with an accuracy of 0.01 mm. by an app. designed by Dyatlov. In all cases the seams corroded to a greater degree than did the metal of the pipe and flange. Al, Cu, Pb, rubber and klingerite gaskets were tried. Best results were obtained from klingerite gaskets; they corroded very little and did not induce corrosion of the adjacent regions of the metal.
W. R. Henn

A58-51A METALLURGICAL LITERATURE CLASSIFICATION



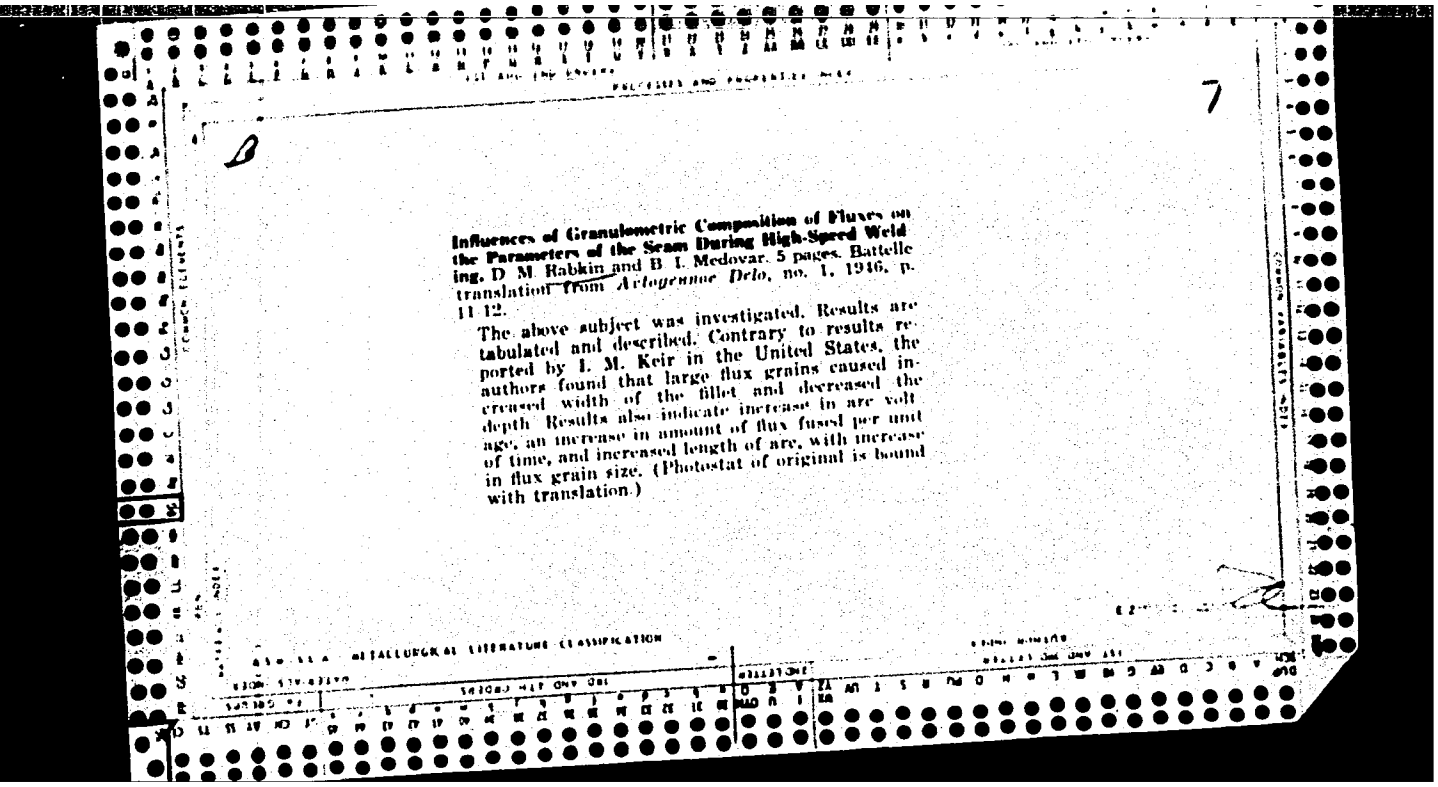
CA

PROCESSES AND EQUIPMENTS (USE)

9

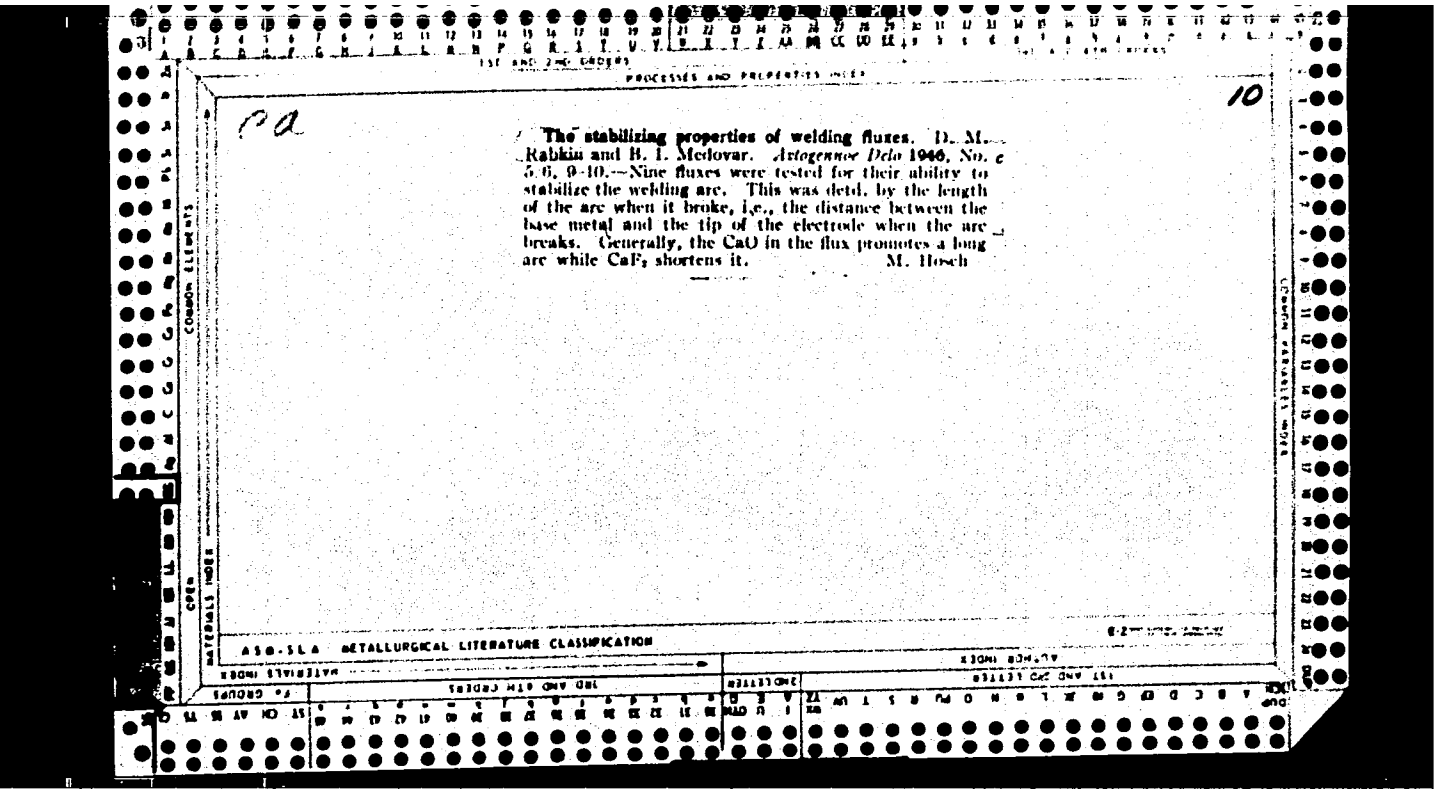
Corrosion of welded joints of low alloy steels for railroad car construction. D. M. Rubkin. *Korroziya i Bor'ba s Nei* 7, No. 3, 31-9(1941).—In an attempt to get a steel with better corrosion resistance than the present C steel, comparative tests were made on Mayari steel, low-Cu (0.22% C, Mayari, Corten, Mn-Cu (0.13% C, 1.22% Mn, 0.57% Si, 0.09% Cu, 0.60% Cr), Cromansil, MC (0.22% C, 1.50% Mn, 0.25% Cu), Mn-C (0.41% C, 1.22% Mn, 0.05% Cu), and ST 3, the present standard C steel. The corrosion resistance of the parent metal and of the welds was checked by accelerated and atm. corrosion tests. All steels had satisfactory weldability except the high-C Mn-C. The accelerated corrosion tests involved a 6-hr. cycle with periodic additions of fog, S, and CO_2. These tests ran for 720 hrs., but the wt. losses were also detd. at 4 intermediate periods. Only preliminary results for the first 85 days were available for the atm. tests. The results in the 2 types of tests were similar in character. The unwelded steels could be divided into 3 groups on the basis of these corrosion tests: (1) ST 3, Cromansil, and MC had practically the same corrosion resistance; (2) Mn-Cu and Mn-C had poorer corrosion resistance than group (1); (3) Mayari and Corten corroded 30-35% less than ST 3. The low-Cu Mayari showed a wt. loss about the same as ST 3, but the decrease of corrosion with time was in line with group (3). If the corrosion resistance of the parent metal was taken as 100, the relative wt. loss of the welds of group (1) steels was 100-140; of group (2) 30-40; and of group (3) 180-200. Mayari and Corten were the best of the group investigated. J. Z. Briggs

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Influences of Granulometric Composition of Fluxes on the Parameters of the Seam During High-Speed Welding. D M Rabkin and B I Medovar. 5 pages. Battelle translation from *Avtogennoe Delo*, no. 1, 1946, p. 11-12.

The above subject was investigated. Results are tabulated and described. Contrary to results reported by I. M. Keir in the United States, the authors found that large flux grains caused increased width of the fillet and decreased the depth. Results also indicate increase in arc voltage, an increase in amount of flux fused per unit of time, and increased length of arc, with increase in flux grain size. (Photostat of original is bound with translation.)

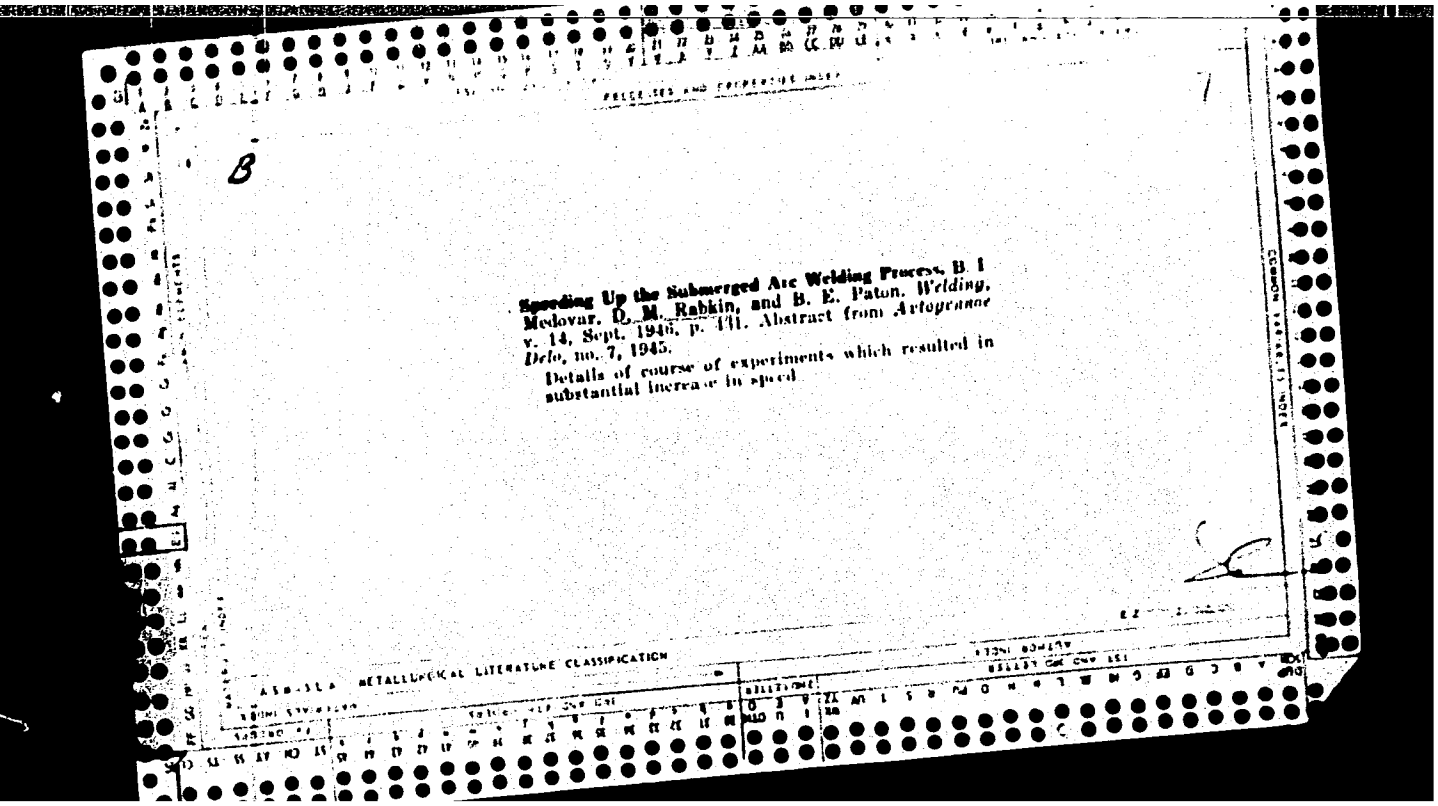


10

Pa

The stabilizing properties of welding fluxes. D. M. Rabkin and B. I. Medovar. *Avtogennoe Delo* **1946**, *No.* 5-6, 9-10.—Nine fluxes were tested for their ability to stabilize the welding arc. This was detd. by the length of the arc when it broke, i.e., the distance between the base metal and the tip of the electrode when the arc breaks. Generally, the CaO in the flux promotes a long arc while CaF_2 shortens it. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



B

Speeding Up the Submerged Arc Welding Process. B. I Medovar, D. M. Rabkin, and B. E. Paton. *Welding*, v. 14, Sept. 1945. p. 141. Abstract from *Avtogennoe Delo*, no. 7, 1945.

Details of course of experiments which resulted in substantial increase in speed

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RABKIN, D. E.

Frumin, I. I. and Rabkin, D. E. "On fluxes for the automatic welding of low-carbon steels", Trudy po avtomat. svarke pod flyusom (In-t elektrosvarki im. Patona), Collection 3, 1948, p. 3-12.

SO: U-3261, 10 April 53, (Letopis 'Zhurnal 'nykh Statey, No. 11, 1949).

RABKIN, D. M.

Medovar, B. I., Rabkin, D. M. and Podgayetskiy, V. V. - "On the extent of the effect of flux oxidation on the restoration of silicium and manganese during automatic welding of low carbon steel," Doklady Akad. nuak Ukr. SSR, No. 6, 1948, p. 21-24, (In Ukranian, resume in Russian)

SO: U-4355, 14 August 53 (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

RABKIN, D. M.

27764

Opredelenie Okislennosti Flyusov. Trudy Po Avtomat. Svarke Pod Flyusom (in-t Elektrosvarki im. Patona), sb. 7, 1949, s. 38-46.

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

RABKIN, D.M.

USSR/Engineering - Welding, Materials Jul 51

"Flux AN-348-A," D. M. Rabkin, Cand Tech Sci

"Avtomat Svarka" No 4 (19), pp 32-43

Presents theoretical and exptl data serving as a basis for development of new flux designated for automatic and semiautomatic welding of low-carbon steel instead of old grades AN-348 and AN-348-Sh. New flux, having decreased content of CaF_2, evolves smaller amt of hazardous gases, improves weld formation, facilitates slag removal and permits use of lower voltage, 60-65 v instead of 70-75 v required for AN-348 flux.

21T28

RABKIN, D.M.

USSR/Engineering - Welding, Fluxes Jun 51

"Cohesion of the Slag Crust With the Metal Surface of a Joint During Welding Under Flux," D. M. Rabkin, Cand Tech Sci, Yu. N. Gotal'skiy, Ye. S. Kudelya, V. V. Podgayetskiy, Engineers, Inst of Elec Welding imeni Acad Ye. O. Paton, Acad Sci Ukrainian SSR

"Avtogen Delo" No 6, pp 10-14

Studied the nature of chem adhesion of slag to the surface of the weld and methods of improving the slag separability. Oxidized layer of metal, formed on surface of weld, creates strong bond

200T34

USSR/Engineering - Welding, Fluxes (Contd) Jun 51

between slag crust and metal. Measures which hamper formation and growth of oxidation film facilitate sepn of slag crust.

200T34

RABKIN, D.M.

New method of automatic welding of aluminum. Avtom.svar. 6 no.4: 45-50 Jl-Ag '53. (MLRA 7:11)

1. Institut elektrosvarki im. Ye.O.Patona Akademii nauk USSR.
(Aluminum--Welding)

RABKIN, D.M.

"Welding handbook 1952." Reviewed by D.M.Rabkin. Avtom.svar. 6 no.4:84-88 Jl-Ag '53. (MLRA 7:11)

1. Institut elektrosvarki im. Ye.O.Patona Akademii nauk USSR. (Welding)

RABKIN, D. M.

PODGAYETSKIY, Vladimir Vladimirovich; RABKIN, Daniil Markovich; DUDKO, D.A., kandidat tekhnicheskiy nauk, otvetstvennyy redaktor; LISENBART, D.K., redaktor; RAKHLINA, N.P., tekhnicheskiy redaktor

[Flux for automatic or semiautomatic welding] Fliusy dlia avtomaticheskoi i poluavtomaticheskoi svarki. Kiev, Izd-vo Akademii nauk USSSR, 1954. 55 p. (MLRA 8:3)
(Electric welding)

RABKIN, D.M.

Mechanical properties of welded aluminum alloy AMts joints.
Avtom.svar. 7 no.3:59-64 My-Je '54. (MLRA 7:7)

1. Institut elektrosvarki im. Ye.O.Patona Akademii nauk SSSR.
(Aluminum alloys--Welding)

RABKIN, D.M.

USSR/Engineering - Welding of aluminum

Card 1/1 Pub. 11 - 2/11

Authors : Rabkin, D. M.

Title : Some characteristics of automatic welding of aluminum and its alloys

Periodical : Avtom. svar. 3, 13-25, May-June 1955

Abstract : The technological and metallurgical characteristics of automatic welding of aluminum and its alloys are discussed. Investigations were conducted on the thoroughness of melting base metal, application of a semienclosed arc, the protection of a welding bath against oxygen, nitrogen and hydrogen, the protection against the presence of oxygen compounds in the composition of fluxes, and the effect of sodium fluoride. Fourteen references: 8 USSR, 3 USA, and 3 German (1923-1954). Graphs; tables; illustration; diagram.

Institution : Acad. of Sc., Ukr. SSR, YE. O. Paton's Institute of Electric Welding

Submitted : April 25, 1955

RABKIN, D.M.

Automatic welding of aluminum and its alloys. Visnyk AN URSR 26 no.7:41-44 Jl'55. (MLRA 8:10)

(Aluminum--Welding)

RABKIN

PERIODICAL ABSTRACTS

AID 4190 - P

Sub.: USSR/Engineering

FRUMIN, I. I., D. M. RABKIN, V. V. PODGAYETSKIY, I. K. POKHODNYA, and E. I. LEYNACHUK.
NIZKOKREMNISTYYE FLYUSY DLYA AVTOMATICHESKOY SVARKI I NAPLAVKI (Low Silicic Fluxes in Automatic Welding and Hard Facing).
Avtomaticheskaya svarka, no. 1, Ja/F 1956: 1-20.

A discussion of the application of various special fluxes with a low silicic content, like the AN-10, AN-20, AN-22 and AN-30, used in welding of alloyed steel to achieve better results and prevent formation of pores in welded seams. The authors present the chemical composition of built-up metal, formation of built-up metal and bead, structure of built up metals, and tendency for formation of crystallized flows, separation of clinker, etc. Thirteen tables, some macropictures, graph and sketch. Sixteen Russian references, 1946-1955.

PERIODICAL ABSTRACTS

AID 4191 - P

Sub.: USSR/Engineering

RABKIN, D. M. and M. L. ZVONKOV
VOPROSY TEKHNOLOGII AVTOMATICHESKOY SVARKI ALYUMINIYA PLAVYASHCH-IMSYA ELEKTRODOM (Technical problems in Automatic Welding of Aluminum with Melting Electrodes). Avtomaticheskaya svarka, no. 1, Ja/F 1956: 21-29.

The technique and equipment used in automatic welding of aluminum with semi-open melting electrodes are discussed: amount of current required, thickness of electrode-wire used and determination of the electrode feeding speed and most favorable voltage. The selection of the proper welding speed and the exact quantity of flux used to get the best quality of welded seam with consideration of the thickness of the metal to be welded, and a description of a spout mechanism for feeding electrode wire, as well as of a measuring hopper for spreading flux, are presented. One table, 3 graphs and 7 macropictures. Four Russian references, 1953-1955.

AID P - 4503

Subject : USSR/Engineering

Card 1/2 Pub. 11 - 1/12

Author : Rabkin, D. M.

Title : Distribution of Temperatures in the Automatic Aluminum Welding.

Periodical : Avtom. svar., 2, 1-11, Mr/Ap 1956

Abstract : The author presents results on measuring temperatures in the vat used for automatic welding of aluminum. He describes the method and technique of measuring by submersion of chromel-alumel and platinum and platinum-rhodium thermo couples. The effect of rate of welding, the influence of temperature of welded metal and of the arc voltage of metal are also discussed. The crystallization of the welding aluminum seam is determined by the time during which the metal remains in the vat in liquid form. Two tables, 3 drawings, 5 graphs and 2 sketches. 4 Russian references (1951-1955).

AID P - 4503

Avtom. svar., 2, 1-11, Mr/Ap 1956

Card 2/2 Pub. 11 - 1/12

Institution : Institute of Electrowelding im. Paton

Submitted : Ja 12, 1956

PORTNOY, N.D.; KONDRATOVICH, V.V.; RABKIN, D.M.; ZVONKOV, M.L.; BOVIN, A.I.; GENRIKHSDORF, N.G.; OLESHKOV, Yu.V.; SHASKIN, A.Ya.; KREMERMAN, P.L.; KHODZHAYEV, A.I.; PISAREVSKIY, M.S.

Automatic welding of aluminum alloy products instead of manual arc welding with a carbon electrode. Suggestion by N.D.Portnoi and others. Prom.energ.11 no.4:21-22 Ap '56. (MLRA 9:7)
(Aluminum alloys--Welding)

RABKIN, D.M.

RABKIN, D.M.

Using aluminum for welded structures. Avtom.svar. 10 no.4:107-112 Jl-Ag '57. (MIRA 10:10)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O.Patona Akademii nauk USSR.
(Aluminum--Welding)

RABKIN, D.M.

125-58-4-12/15

AUTHORS: Rabkin, D.M., Candidate of Technical Sciences, Zvonkov, M.L. and Verchenko, V.A., Engineers

TITLE: Experience in Constructing Welded Aluminum-Magnesium Containers (Opyt izgotovleniya svarnykh yëmkostey iz aluminiyevogo-magniyevogo splava)

PERIODICAL: Avtomaticheskaya Svarka, 1958, Nr 4, pp 84-88 (USSR)

ABSTRACT: A detailed description is given of all operations performed in assembling 700 m^3 aluminum-magnesium alloy containers at the Kombinat sinteticheskikh zhirozameniteley (Synthetic Fat Substitutes Combine). The electric arc welding method is used for all horizontal connections, and oxy-gas (propane-butane mixture) for the vertical welds which are welded by two operators simultaneously - one on the inside and one on the outside of the container, so that the operation proceeds with only one welding puddle. The information includes the chemical composition of the base metal - "AMg5B" alloy - and special "AN-A103" electrode coating and "AN-A201" flux developed for the purpose at the Electric Welding Institute imeni Paton (Tables 1, 2). The following persons participated in the work:

Card 1/2

125-58-4-12/15

Experience in Constructing Welded Aluminum-Magnesium Containers

G.B. Al'terman, I.M. Bolotin, V.M. Pauler, L.D. Polonskiy, O.A. Videnskiy, P.K. Chubukov, I.I. Kravtsov, Ya.M. Yalovoy.
There are 3 tables and 7 photographs.

ASSOCIATION: Institut elektrosvarki imeni Ye.O. Patona AN UkrSSR (Electric Welding Institute imeni Ye.O. Paton of the AS UkrSSR); Prodmontazh.

SUBMITTED: December 3, 1957

AVAILABLE: Library of Congress

Card 2/2

RABKIN D.M.

125-58-5-4/13

AUTHORS: Rabkin, D.M., and Zvonkov, M.L.

TITLE: Automatic Welding of Aluminum by a Split Electrode (Avtomaticheskaya svarka alyuminiya rasshcheplennym elektrodom)

PERIODICAL: Avtomaticheskaya Svarka, 1958, Nr 5, pp 25-31 (USSR)

ABSTRACT: The peculiarities and application of the split-electrode method of welding were given previously [Ref. 2,3 and 4]. The method consists of the use of two electrodes moving parallel to one another and producing two puddles which merge when the distance between the electrodes diminishes. The merged-puddle is wider and shallower than the puddle produced by a single arc. The method is schematically illustrated (Fig. 1) and calculations of the fusion depth as a function of the distance between electrodes are made. The method permits welding butt-joints without the use of a steel support. The welds are dense, wide, with good mechanical properties. Regular welding equipment needs only minor adjustment when applying the split-electrode method: a special pulling-type holder (Fig. 5) with two pairs of guide pipes, and an additional bobbin for electrode wire. The method has been successfully introduced at the Kiyev plant

Card 1/2

Automatic Welding of Aluminum by a Split Electrode

"Bol'shevik" where it is used for welding aluminum vessels (the technology is briefly described in figure 6 and 7). The following advantages resulted: consumption of electrode wire has been reduced by 40%, and electric energy by 20%. Work efficiency has increased three times as compared with manual arc welding. The following engineers of the "Bol'shevik" plant took part in developing the split-electrode welding technology: I.M. Mirgorodskiy, F.S. Bugriy, V.M. Ponomar', I.M. Savich, V.M. Grishchenko.
There are 7 figures and 5 Soviet references.

ASSOCIATION: Institut elektrosvarki imeni Ye.O. Patona AN UkrSSR (Electric Welding Institute imeni Ye.O. Paton of the AS UkrSSR)

SUBMITTED: January 9, 1958

AVAILABLE: Library of Congress

AUTHORS: Grabin, V.F., Rabkin, D.M. SOV-125-58-8-6/16

TITLE: Method of Metallographic Examination of Weld Joints in Aluminum (Metodika metallograficheskogo issledovaniya svarnykh shvov alyuminiya)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 8, pp 37-40 (USSR)

ABSTRACT: Information is presented on technology of polishing prior to examination of macro- and microstructures in aluminum weld seams. Information includes recommendations for reagents of electrolytic polishing, composition of which is given in a table, as well as optimum parameters of the polishing process. There are 2 photos, 1 diagram, 1 table and 5 references, 2 of which are Soviet, 1 German, 1 English and 1 French.

ASSOCIATION: Institut elektrosvarki imeni Ye.O. Patona, AN UkrSSR (Institute of Electric Welding imeni Ye.O. Paton, AS UkrSSR)

SUBMITTED: February 27, 1958

1. Metallurgy 2. Welded joints--Inspection

Card 1/1

PHASE I BOOK EXPLOITATION SOV/3364

Rabkin, Daniil Markovich, Samuil Markovich Gurevich, and Filipp Semenovich Burgiy

Svarka tsvetnykh metallov (Welding of Nonferrous Metals) Moscow, Mashgiz, 1959. 69 p. (Series: Biblioteka svarshchika) 15,000 copies printed.

Ed.: V. K. Serdyuk, Engineer; Ed. of this Vol.: A. Ye. Asnis, Candidate of Technical Sciences; Editorial Board: A. Ye. Asnis, A. A. Kazimirov, B. I. Medovar, B. Ye. Paton (Resp. Ed.); and V. V. Podgayetskiy; Chief Ed. (Southern Division, Mashgiz): V. K. Serdyuk, Engineer.

PURPOSE: This book is intended for welders.

COVERAGE: The authors present basic information on various methods of welding aluminum, magnesium, titanium, zirconium, nickel, molybdenum, lead, and various alloys of these metals. They describe manual welding of these metals, and automatic welding and its applications. They also provide instructions on the selection of proper welding regimes and the use of required equipment, the preheating of metal, and heat treatment. Experience of the Kiyev "Bol'-shevik" Plant, the Sumy Plant imeni Frunze, and the Ural Railroad-Car Plant is described. No personalities are mentioned. There are 11 references, all

Card 1/3

Welding of Nonferrous Metals SOV/3364

Soviet.

TABLE OF CONTENTS:

Card 2/3

AVAILABLE: Library of Congress (TS227.R 25)

VK/fal
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RABKIN, D.M.

25(1) PHASE I BOOK EXPLOITATION SOV/3421

Akademiya nauk URSR, Kiyev, Institut elektrosvarki imeni akademika Ye.O. Patona

Vnedreniye novykh sposobov svarki v promyshlennost', vyp. 2 (Introduction of New Welding Methods in Industry; Collection of Articles, No. 2) Kiyev, Gos. izd-vo tekhn. lit-ry Ukrainskoy SSR, 1959. 194 p. Errata slip inserted. 3,000 copies printed.

Ed.: V. Orkusha; Tech. Ed.: S. Matusevich.

PURPOSE: This book is intended for workers in the welding industry.

COVERAGE: The book contains a discussion of welding techniques and problems by groups of scientists and welders. Much attention is given to problems in the application of new methods of mechanized welding and electro-slag welding. This is the second collection of articles under the same title prepared and published by the Institut elektrosvarki imeni Ye.O. Patona (Institute of Electric Welding imeni Ye.O. Paton). The preface is written by B.Ye. Paton, Academician of the Ukrainian Academy of Sciences and Winner of the Lenin Prize. There are no references.

Kazimirov, A. A. [Candidate of Technical Sciences; Institut elektrosvarki imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton)], and V. F. Zabotin [Chief Engineer; Khersonskiy sudostroitel'nyy zavod (Kherson Shipbuilding Plant)]. Automatic Welding in Shipbuilding 124

Vakhnin, Yu. N. [Engineer], B. S. Kasatkin [Candidate of Technical Sciences], N. I. Kakhovskiy [Candidate of Technical Sciences], A. M. Poolzovtsev [Engineer; Institut elektrosvarki imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton)], S. I. German [Candidate of Technical Sciences, Chief of Welding Laboratory; Khar'kovskiy turbinnyy zavod imeni S. M. Kirova (Khar'kov Turbine Plant imeni S. M. Kirov)], and Z. L. Klinovitskiy, Chief of Welding Section; Bryanskiy mashinostroitel'nyy zavod (Bryansk Machinery Plant)]. Carbon-dioxide Shielded Welding in Production of Steam Turbines 137

Zaruba, I. I. [Candidate of Technical Sciences], and A. G. Potap'yevskiy [Senior Engineer; Institut elektrosvarki imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton)]. Introduction of Automatic and Semi-automatic Carbon-dioxide Shielded Welding 148

Medovar, B. I. [Candidate of Technical Sciences], A. G. Potap'yevskiy [Senior Engineer; Institut elektrosvarki imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton)], F. A. Ratin [Senior Engineer], S. V. Yunger, Supervisor of the Welding Laboratory; Stalingradskiy filial Giproneftemash (Stalingrad Branch of State Design and Scientific Research Institute for Petroleum Machinery)], and S. A. Zandberg [Chief of Welding Office; Stalingradskiy mashinostroitel'nyy zavod imeni Petrova (Stalingrad Machinery Plant imeni Petrov)].
Development and Introduction of New Technique in Automatic Submerged-arc Welding of Two-ply Steel With Stainless Chromium Facing 157

Zvonkov, M.L. [Engineer] D. M. Rabkin [Candidate of Technical Sciences; Institut elektrosvarki imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton)], V. A. Verchenko, [Engineer; trest "Prodmontazh" (Production Assembly Trust)], and I. M. Mirgorodskiy [Chief Engineer; zavod "Bol'shevik" ("Bol'shevik" Plant)]. Experience Gained in Welding Containers Made of Aluminum and Its Alloys 173

Asnis, A. Ye. [Candidate of Technical Sciences; Institut elektrosvarki imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton)], G. G. Gavrilenko [Engineer], A. V. Prokhorov [Engineer; Zhdanovskiy zavod imeni Il'icha (Plant imeni Il'ich in Zhdanov), and S. V. Yunger [Engineer; Stalingradskiy filial Giproneftemash (Stalingrad Branch of State Design and Scientific Research Institute for Petroleum Machinery)]. High-strength Steels for Weldments 183

AVAILABLE: Library of Congress (TS 227.A359)

VK/fal
5-4-60

Card 7/7

2-3

Rabkin, D.M.

28(1) PHASE I BOOK EXPLOITATION SOV/2156

Soveshchaniye po kompleksnoy mekhanizatsii i avtomatizatsii tekhnologicheskikh protsessov. 2nd, 1956.

Avtomatizatsiya mashinostroitel'nykh protsessov; /trudy soveshchaniya/, tom. 1: Gor'kovskaya obrabotka metallov (Automation of Machine-Building Processes; Proceedings of the Conference on Over-All Mechanization and Automation of Technological Process, Vol 1: Hot Metal-Forming) Moscow, 1959. 394 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: V.I. Dikushin, Academician; Compiler: V.M. Raskatov; Ed. of Publishing House: V.A. Katov; Tech. Ed.: I.P. Kus'min.

PURPOSE: The book is intended for mechanical engineers and metallurgists.

COVERAGE: The transactions of the Second Conference on the Over-All Mechanization and Automation of Industrial Processes, September 25-29, 1956, have been published in three volumes. This book, Vol. 1, contains articles under the general title, Hot Working of Metals. The investigations described in the book were conducted by the Sections for Automation and Hot Working of Metals, under the direction of the following scientists: casting - P.N. Aksenov, D.P. Ivanov and G.M. Oslovi forming - A.I. Tselikov, A.D. Tomlenov and V.P. Mashcherin; welding - G.A. Nikolayev, B.I. Prolov and G.A. Maslov. There are 183 references: 132 Soviet, 34 English, 6 German, and 1 French.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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9/23/59

Card 8/8

PATON, B.Ye., akademik, doktor tekhn.nauk, laureat Leninskoy premii; VOLOSHKEVICH, G.Z., kand.tekhn.nauk, laureat Leninskoy premii; OSTROVSKAYA, S.A., kand.tekhn.nauk; DUDKO, D.A., kand.tekhn.nauk; POKHODNYA, I.K., kand.tekhn.nauk; STERENBOGEN, Yu.A., kand.tekhn. nauk; RUBLEVSKIY, I.N., inzh.; ZHEMCHUZHNIKOV, G.V., kand.tekhn. nauk; ROZENBERG, O.O., inzh.; SEVBO, P.I., kand.tekhn.nauk; NOVIKOV, I.V., inzh.; MEDOVAR, B.I., kand.tekhn.nauk; DIDKOVSKIY, V.P., inzh.; RABKIN, D.M., kand.tekhn.nauk; TYAGUN-BELOUS, G.S., inzh.; ZARUBA, I.I., kand.tekhn.nauk, retsenzent; GREBEL'NIK, P.G., kand.tekhn.nauk, red.; TYNYANYY, G.D., red.

[Electric slag welding] Elektroshlakovaia svarka. Izd.2., ispr. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 409 p. (MIRA 13:4)

1. AN USSR (for Paton).
(Electric welding)

25(1,7)

SOV/125-59-8-2/18

AUTHORS: Movchan, B.A., Rabkin, D.M., Gurevich, S.M., and Zagrebenyuk, S.D.

TITLE: Some Technological Features of Electron Beam Welding in a Vacuum

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 8, pp 12-17 (USSR)

ABSTRACT: This article describes an apparatus for electron beam welding in a vacuum developed at the Institut elektrosvarki imeni Ye.O. Patona (Institute of Electric Welding imeni Ye.O. Paton), and work done to determine the relation between parameters of the welding process and characteristics of the melt obtained. The authors first describe the IES-L1 laboratory device for electron beam welding in a vacuum, consisting of: 1) a vacuum chamber with rotating table and an external drive; 2) a vacuum system using a VN-461M lamellate-stator pump, a high-vacuum steam-oil pump TsVL-100, and type VIT-1 vacuum gauge; 3) electrical equipment consisting of step-up and filament transformers from a GKT-250 X-ray apparatus, a KRM-150 kenotron, LATR

Card 1/4

autotransformers, and control and measuring equipment. Construction and outfitting of the vacuum chamber is described in some detail. The half-wave kenotron rectifier is rated at a consumed power of up tp 1 kw. Voltage during welding can be varied in limits up to 10-15 kV; this range is below that at which X-ray radiation becomes a problem. Welding current up to 150 ma is available. Vacuum is no less than 2×10^{-4} mm of Hg. In the experimental chamber circular, junction, and over-lapping seams can be made. Welding speed is smoothly regulated from 2-28 m/hr. During experiments to determine the influence of the parameters of the process of electron beam welding in a vacuum on the melting of the basic metal, the relation between the depth and width of the weld and the amount of electron current, anode voltage (that between the cathode and welded object), welding speed and position of the cathode in relation to the plates being welded was studied. The basic metal used in the experiments was industrial titanium VT1. Fusing was

Some Technological Features of Electron Beam Welding in a Vacuum

performed on a plate 5-6 mm thick under various welding conditions. Basic parameters of the process are given. Computation of the required degree of rarefaction in the chamber is outlined. A higher than usual vacuum - 2×10^{-4} mm of Hg - was used in these experiments to assure quality results. It is stated that at pressures higher than 3×10^{-3} mm of Hg the electronic process can easily become an ionic one. Results of the experiment are illustrated (Figs 5-8) and briefly outlined. It was established that an increase in current causes a noticeable increase in the depth and width of the weld. Voltage also has a significant influence on the melt of the basic metal. In contrast to electric arc welding, a voltage increase substantially increases the depth of the weld. The width and depth of the melt can also be controlled by varying the welding speed.

SOV/125-59-8-2/18

Some Technological Features of Electron Beam Welding in a Vacuum

There are 1 photograph, 1 schematic diagram, 2 structural diagrams, 4 graphs and 3 references, 1 of which is Soviet and 2 English.

ASSOCIATION: Ordena trudovogo krasnogo znameni - Institut elektrosvarki imeni Ye.O. Patona (Order of the Red Banner of Labor - Institute of Electric Welding imeni Ye.O. Paton) AN USSR (AS Ukr SSR)

SUBMITTED: May 14, 1959

Card 4/4

SOV/125-59-8-6/18

18(7)
AUTHORS: Rabkin, D.M., Langer, N.A., Yagupol'skaya, L.N., and Pokhodenko, V.D.

TITLE: On Methods of Corrosion Testing of Welded Joints of Aluminum in Nitric Acid

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 8, pp 49-56 (USSR)

ABSTRACT: The article deals with methods of testing corrosion resistance of welded joints of aluminum. The authors wish to ascertain the character of the action of nitric acid in relation to its concentration and temperature, and more precisely define the necessary preparation of surface of samples and other experimental conditions in order to work out the most acceptable accelerated method of testing welded joints of aluminum in nitric acid. The authors open with a review and critique of other work in this field, including that of V.P. Batrakov [Ref 1], V.A. Savchenko [Ref 7], and F.B. Slomyanskaya and A.N. Krutikov [Ref 10], but they find a comparison difficult because the methods used varied. A method of testing welded joints of aluminum, worked

Card 1/4

On Methods of Corrosion Testing of Welded Joints of Aluminum in Nitric Acid

out by NIIKhIMMASh - boiling test samples in concentrated nitric acid for a long period of time (100-200 hrs)- is criticized as having poor reproducibility of results. The experiments described in this article were performed on type Al aluminum of the following composition: 0.20% Fe, 0.20% Si, ≤ 0.01% Cu, the rest - aluminum. Sample dimensions were 70x30x4 mm; seam width was 12-14 mm. Nitric acid in concentrations of 10, 20, 30, 40, 50, 60, 70, 80% by wt. were used. Further particulars are contained in the text. The following conclusions were reached on the basis of the experiments: 1) the highest rate of corrosion was attained using 30% HNO_3; for accelerated corrosion testing it is recommended that boiling 50% HNO_3 be used; 2) corrosion speed in 50% HNO_3 was determined as a function of time (Fig 1); the curve of this function levels out 2 hours after the start of the test; 3) tests in 50% HNO_3 guarantee a higher reproducibility of results in comparison with tests in concentrated

On Methods of Corrosion Testing of Welded Joints of Aluminum in Nitric Acid

acid; in addition the character of the corrosion damage is preserved. The condition of the surface of the samples was found to have a comparatively small effect on the rate of corrosion (Fig 3). Further tests were carried out for comparative evaluation of the corrosion resistance of welded joints; a) boiling samples in 98% HNO_3, for 100 hours, and b) by the accelerated method, i.e. two-hour boiling in 50% HNO_3. Samples with three types of welds were used. Samples were compared by weight in arriving at a criterion for corrosion resistance. Results are tabulated (Table 3). Results of the 100-hour test in 98.3% HNO_3 support known data to the effect that identical samples in the same acid and under similar testing conditions give poorly corresponding results. However, good reproducibility of results was obtained in the 2-hour tests with 50% HNO_3. In addition, structure and defects in the seam show up better after the two-hour test. Weight criterion of the corrosion resistance should be supple-

On Methods of Corrosion Testing of Welded Joints of Aluminum in Nitric Acid

mented by visual inspection of the seam. There are 2 photographs, 3 graphs, 5 tables, and 13 references, 9 of which are Soviet, 2 English, 1 German, and 1 Czech.

ASSOCIATION: Ordena trudovogo krasnogo znameni - Institut elektrosvarki imeni Ye.O. Patona AN USSR (Order of the Red Banner of Labor - Institute of Electric Welding imeni Ye.O. Paton, AS UkrSSR)

SUBMITTED: April 10, 1959

SOV/125-59-10-12/16

18(5), 25(1), 28(1)

AUTHOR: Rabkin, D.M., Candidate of Technical Sciences, and Steblovskiy, B.A., Engineer

TITLE: The Unilateral Automatic Welding of 35mm Thick Aluminum Busbars By Means of a Semi-Enclosed Arc Over Flux Layer

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 10, pp 88-89 (USSR)

ABSTRACT: The author of the article criticizes the methods hitherto used for welding aluminum busbars (carbon electrodes, argon-arc welding with wolfram electrodes), briefly listing their limitations, and proceeds to describe a recent attempt to use a semi-enclosed arc for the automatic welding of these conduits by means of a TS-17m tractor. Aluminum ribbon was placed on the butt-joint and flux was added during the welding process (current - 800-850 amps, speed - 9-10m/hour, duration of weld 3 mins). However, much time was lost due to the complicated nature of the equipment, and an account is then given of a welding process developed by the Institut elektrosvarki (Institute of Electric Welding). An ABC welding-head was modernized for the tests and a special flux-dispenser

Card 1/3

The Unilateral Automatic Welding of 35mm Thick Aluminum Busbars By Means of a Semi-Enclosed Arc Over Flux Layer

designed (Fig 1); the whole welding-process was considerably speeded up, and a recess was laid in the base plate to form the reverse side of the welded joint. Welding was carried out with Mark AD1 electric wire (5mm diameter) and flux Type AN-A1. Current was provided by 2 parallel PSM-1,000 generators and the use of direct polarity considerably improved the shape of the reverse side (Fig 2). The most favorable figures for welding 35mm diameter metal were: I_{sv} - 1,000-1,110 amps, U_d - 45-48 volts, $U_{x.x}$ - 65 volts, V_{sv} - 11-12m/hour. Toughness tests only indicate the tensile strength of the basic metal, since the break occured far from the seam (Fig 4). Production rose by 150-200% in comparison with manual arc-welding by carbon electrodes. There are 4 photographs and 5 Soviet references.

ASSOCIATION: Ordena trudovogo krasnogo znameni institut elektosvarki imeni Ye.O. Patona AN USSR (Order of the Red Banner of Labor Institute of Electric Welding imeni

SOV/125-59-10-12/16

The Unilateral Automatic Welding of 35mm Thick Aluminum Busbars By Means of a Semi-Enclosed Arc Over Flux Layer

Ye.O.Paton AS UkrSSR)

SUBMITTED: May 5, 1959

Card 3/3

SOV/125-59-11-3/22

18 (2, 3, 5)

AUTHORS: Asnis, A.Ye., Rabkin, D.M., Candidates of Technical Sciences, and Savich, I.M., Engineer

TITLE: Impact Resistance of Welded Joints from Aluminum Alloy AMg6

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 11, pp 20-25 (USSR)

ABSTRACT: During last years, the application of aluminum-magnesium alloys for welded structures has been considerably increased. Such alloys as AMg6 (with 6% Mg) have a tensile strength of 30-32 kg/mm^2 and can in many structures supersede steel. However, the impact resistance properties of these alloys have not yet been sufficiently studied. This article deals with the problem of determining these properties. Tests were carried out on both alloy AMg6 and low-alloy steel; the results of tests for toughness of AMg6 are given in Table 1; curves giving the toughness of both materials depending on the temperature are shown in Fig 1. Further on, the authors give data on resistance of test pieces against

Card 1/3

Impact Resistance of Welded Joints from Aluminum Alloy AMg6

single impacts (Table 2). Test pieces made from alloy AMg6, 20 mm in thickness, had the form shown in Fig 2. For the sake of comparison, pieces of low-carbon, low-alloysteel MSt.3kp, 16 mm in thickness, and of steel 15GF, 12 mm in thickness, were tested. Testing resistance against repeated impacts was performed on test pieces made also from both AMg6 alloy and low-carbon steel (Fig 4); results are given in Table 3. On the basis of performed tests, the following conclusions are drawn: 1) There is, practically, no difference between the toughness of the weld material and that of the base metal AMg6; 2) Resistance against single impacts at temperatures +10°, -20°, and -60°C is, practically, the same; 3) At a temperature of -20° and -60°C, the number of strokes required to break a test piece made from alloy AMg6 is greater than is the case with low-carbon steel MSt.3kp and low-alloy steel 15GF; 4) When repeated impact force is applied, the pieces made of AMg6 alloy possess a higher durabili-

SOV/125-59-11-3/22

Impact Resistance of Welded Joints from Aluminum Alloy AMg6

ty than those made from low-carbon and low-alloy steel. There are 1 graph, 3 tables, 2 photographs, 1 figure and 5 Soviet references.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O. Patona AN USSR (Order of the Red Banner of Labor Institute of Electric Welding imeni Ye.O. Paton, AS UkrSSR)

SUBMITTED: May 26, 1959

Card 3/3

SOV/125-59-11-4/22

18 (2, 3, 5)

AUTHORS: Grabin, V.F., Engineer, and Rabkin, D.M., Candidate of Technical Sciences

TITLE: Composition of Phases in Weld Metal when Welding Alloy AMg6

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 11, pp 26-28(USSR)

ABSTRACT: The main admixtures in the weld metal when welding alloy AMg6 are magnesium, silicon and iron. For research of phase composition in the weld, test pieces welded with argon arc non-fusible electrodes, both with a metal pre-heating up to 300°C and without it, were used. The method of preparation of microsections is similar to that described by A.A. Bochvar in his work "Metallography", published by the Metallurgizdat, 1956. The composition of phases in aluminum-magnesium alloy is given in Fig 1. In Fig 2, two phases, β and Mg_2Si, are seen. The prints were made in an electrolitic bath filled with 8% solution of nitric acid in ethyl alcohol by using 0.1-0.2 amp/cm^2 curr-

Card 1/2

Composition of Phases in Weld Metal when Welding Alloy AMg6

ent. In Fig 3, a photograph made by electronic microscope is given; the β phase with a comparatively even surface can be clearly seen. There are 4 graphs, 4 photographs and 8 references, 6 of which are Soviet, 1 English and 1 German.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O. Patona AN USSR(Order of the Red Banner of Labor Institute of Electric Welding imeni Ye.O. Paton AS UkrSSR)

SUBMITTED: March 9, 1959

Card 2/2

SOV/125-12-2-5/14

18(5)
AUTHOR: Rabkin, D.M., and Grabin, V.F.

TITLE: The Microstructure of the Metal of a Joint when Welding Aluminum (Mikrostruktura metalla shva pri svarke alyuminiya)

PERIODICAL: Avtomaticheskaya svarka, 1959, Vol 12, Nr 2, pp 49-53 (USSR)

ABSTRACT: The article deals with the results of metallographic research into the phase composition of a joint when welding aluminum with varying iron and silicon content. The quantity of iron in aluminum may reach 1.1%, and of silicon 1.1%, but aluminum for welding does not contain more than 0.4% of either. No data are available on the structure of the metal of a joint when welding aluminum. Data on the structure of cast aluminum containing a small quantity of iron and silicon is also lacking. The article uses the terminology accepted by A.A.Bochvar (The Study of Metals - Metallovedeniye, Metallurgizdat, Moscow 1956). As a result of a reduction in the solubility of admixtures,

Card 1/3